



Dart Aerospace Ltd.  
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Canada

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**RB23003267-5**  
**Job Sheet 197218**



**Part No:** RB23003267-5

**Job Qty:** 2 pcs *4 MLL*

**Part Name:** #52 Drill Bit & Block Assembly



**Part Weight:** 0 lbs

**Status:** New

**Priority:** Medium

**Job Created:** 7/3/19

**Job Tracking No:**

**Created By:** Marie Lajeunesse

**Due Date:** 8/5/19

**Type:** Stock

**Description:**

**Note:** DWG RB23003267 Rev.4 IPP Rev. A 19.02.13 New issue DP Verify DD

**Ship Via:**

### Bill of Materials

### Job Routing

| Op No | Operation           | Qty   | Start Date | Due Date | Standard Setup Hrs | Run Hrs | Workcenter/Supplier | Lead Time | Sign-off   |
|-------|---------------------|-------|------------|----------|--------------------|---------|---------------------|-----------|------------|
| 100   | Small Fab - 1       | 2 pcs | 8/5/19     |          | 0.08               | 0.25    | Small Fab - 1       |           |            |
|       |                     |       |            |          |                    |         | Small Fab - 2       |           | <i>MLL</i> |
|       |                     |       |            |          |                    |         | Small Fab - 3       |           |            |
|       |                     |       |            |          |                    |         | Small Fab - 4       |           |            |
|       |                     |       |            |          |                    |         | Small Fab - 5       |           |            |
|       |                     |       |            |          |                    |         | Small Fab - 6       |           |            |
|       |                     |       |            |          |                    |         | Small Fab - 7       |           |            |
| 110   | QC 5                | 2 pcs | 8/5/19     |          | 0.00               | 0.00    | QC 5 - 10           |           |            |
|       |                     |       |            |          |                    |         | QC 5 - 12           |           |            |
|       |                     |       |            |          |                    |         | QC 5 - 17           |           |            |
|       |                     |       |            |          |                    |         | QC 5 - 18           |           |            |
|       |                     |       |            |          |                    |         | QC 5 - 19           |           |            |
|       |                     |       |            |          |                    |         | QC 5 - 22           |           |            |
|       |                     |       |            |          |                    |         | QC 5 - 24           |           |            |
|       |                     |       |            |          |                    |         | QC 5 - 3            |           |            |
|       |                     |       |            |          |                    |         | QC 5 - 43           |           |            |
|       |                     |       |            |          |                    |         | QC 5 - 49           |           |            |
|       |                     |       |            |          |                    |         | QC 5 - 51           |           |            |
|       |                     |       |            |          |                    |         | QC 5 - 58           |           |            |
|       |                     |       |            |          |                    |         | QC 5 - 68           |           |            |
| 120   | Small Fab - 2 - B4B | 2 pcs | 8/5/19     |          | 0.00               | 0.20    | Small Fab - 1 - B4B |           |            |
|       |                     |       |            |          |                    |         | Small Fab - 2 - B4B |           |            |
|       |                     |       |            |          |                    |         | Small Fab - 3 - B4B |           |            |
|       |                     |       |            |          |                    |         | Small Fab - 4 - B4B |           |            |
|       |                     |       |            |          |                    |         | Small Fab - 5 - B4B |           |            |
|       |                     |       |            |          |                    |         | Small Fab - 6 - B4B |           |            |
|       |                     |       |            |          |                    |         | Small Fab - 7 - B4B |           |            |



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**Container No:** S199662



**Part:** RB23003267-5

**Job No:** 197218

**Serial No/Batch:** S199662

**Revision:** 4

**Inspector:**

**Exp Date:**

**Instructions:**

**Date:** 07/22/19

*Program done stop w/ N/R*

**DAS**  
**40**  
**9-89**

**JUL 29 2019**

*N/R*

|     |                             |       |        |           |                        |      |
|-----|-----------------------------|-------|--------|-----------|------------------------|------|
| 125 | QC 5                        | 2 pcs | 8/5/19 | 0.00 0.00 | QC 5 - 10              |      |
|     |                             |       |        |           | QC 5 - 12              |      |
|     |                             |       |        |           | QC 5 - 17              |      |
|     |                             |       |        |           | QC 5 - 18              |      |
|     |                             |       |        |           | QC 5 - 19              |      |
|     |                             |       |        |           | QC 5 - 22              |      |
|     |                             |       |        |           | QC 5 - 24              |      |
|     |                             |       |        |           | QC 5 - 3               |      |
|     |                             |       |        |           | QC 5 - 43              |      |
|     |                             |       |        |           | QC 5 - 49              |      |
|     |                             |       |        |           | QC 5 - 51              |      |
|     |                             |       |        |           | QC 5 - 58              |      |
|     |                             |       |        |           | QC 5 - 68              |      |
|     |                             |       |        |           | QC 5 - 9               |      |
|     |                             |       |        |           | QC 5 - 50              |      |
|     |                             |       |        |           | QC 5 - 30              |      |
|     |                             |       |        |           | QC 5 - 40              |      |
| 130 | Packaging 3-1 - Stock - B4B | 2 pcs | 8/5/19 | 0.00 0.00 | Packaging 3 - 1 - B4B  |      |
|     |                             |       |        |           | Packaging 3 - 2 - B4B  |      |
|     |                             |       |        |           | Packaging 3 - 3 - B4B  |      |
|     |                             |       |        |           | Packaging 3 - 4 - B4B  |      |
|     |                             |       |        |           | Packaging 3 - 5 - B4B  | DAS  |
|     |                             |       |        |           | Packaging 3 - 6 - B4B  | 28   |
|     |                             |       |        |           | Packaging 3 - 7 - B4B  | 9-89 |
|     |                             |       |        |           | Packaging 3 - 8 - B4B  |      |
|     |                             |       |        |           | Packaging 3 - 9 - B4B  |      |
|     |                             |       |        |           | Packaging 3 - 10 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 11 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 12 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 13 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 14 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 15 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 16 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 17 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 18 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 19 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 20 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 21 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 22 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 23 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 24 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 25 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 26 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 27 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 28 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 29 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 30 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 31 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 32 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 33 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 34 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 35 - B4B |      |
|     |                             |       |        |           | Packaging 3 - 36 - B4B |      |
| 140 | QC 21 - SA                  | 2 pcs | 8/5/19 | 0.00 0.00 | QC 21 - SA - 21        | DAS  |
|     |                             |       |        |           | QC 21 - SA - 70        | 21   |
|     |                             |       |        |           | QC 21 - SA - 53        | 1-89 |

Part Op 100 - Assemble as per drawing using LOC TITE multipurpose epoxy.  
 Descriptions: 110 - (QC5- Inspect part completeness to step on W/O)  
 120 - Laser engrave as per drawing

125 - QC5- Inspect part completeness to step on W/O  
130 - (Identify as per dwg & Stock Location: \_\_\_\_\_)  
140 - (QC21- Final Inspection - Work Order Release)

**Job BOM**

| Part / Item   | Component Name | Quantity     | Operation         | Container |
|---------------|----------------|--------------|-------------------|-----------|
| RB23003267-5A | #52 Drill Bit  | 2 pcs (1 ea) | 100-Small Fab - 1 | 5199048   |
| RB23003267-5B | Block          | 2 pcs (1 ea) | 100-Small Fab - 1 | 5160909   |

**Job Allocations**

| Operation         | Component Part | Required | Inventory | Allocated |
|-------------------|----------------|----------|-----------|-----------|
| 100-Small Fab - 1 | RB23003267-5A  | 2        | 0         | 0         |
|                   | RB23003267-5B  | 2        | 4         | 0         |

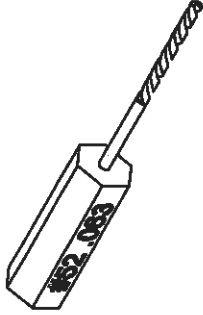
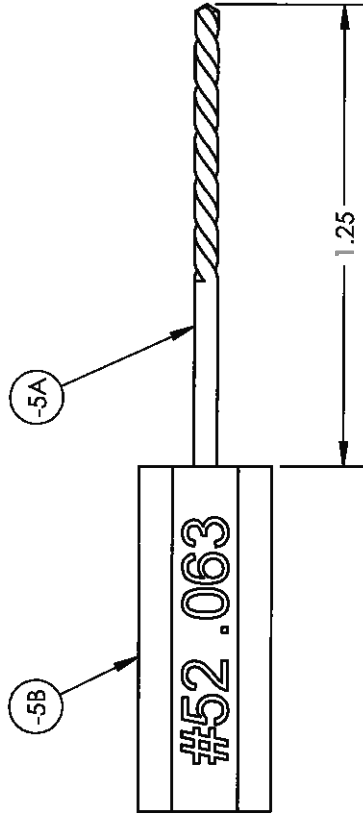
**Part Specifications**

Specifications could not be found.

Plex 7/3/19 8:44 AM Dart.lajeunesse.marie

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| REV |     | REVISIONS |  | DESCRIPTION |  | DATE |  | INITIAL |  | APPROVED |  |
|-----|-----|-----------|--|-------------|--|------|--|---------|--|----------|--|
| REV | ECR |           |  |             |  |      |  |         |  |          |  |



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WORK ORDER  
NO. 1937268 WJS  
19-07-03

NOTE:  
ASSEMBLE WITH EPOXY.



TITLE  
POWER TURBINE CLEANING KIT

|            |                                    |                              |   |
|------------|------------------------------------|------------------------------|---|
| DWG NO.    | RB23003267-5                       | REV                          | 4 |
| MAT'L      | UNLESS OTHERWISE SPECIFIED         |                              |   |
| HEAT       | DIMENSIONS ARE IN INCHES           |                              |   |
| FINISH     | XXX $\pm .005$ FRACTIONS           |                              |   |
| SPEC       | XX $\pm .01$ ANGLES $\pm .5^\circ$ |                              |   |
|            | X $\pm .1$ SURFACES $\pm .125$     |                              |   |
| DRAWN BY:  | CLOUGH                             | 1. BREAK ALL SHARP EDGES     |   |
| CHECKED:   | CLOUGH                             | 2. DIMENSIONAL LIMITS APPLY  |   |
| OPPS APPR: | ANDERSON                           | 3. AFTER PLATING             |   |
| QA APPR:   | LINDSAY                            | 3. INTERPRET DIM AND TOL PER |   |
| APPROVED:  | GILBERT                            | ASME Y14.5M-2009             |   |
| SCALE      | 2:1                                | USED ON MODEL                |   |
|            |                                    | SEE NOTE 1, SHEET 1          |   |
|            |                                    | DATE 1/17/2001               |   |
|            |                                    | SHEET 6 OF 18                |   |

#52 DRILL BIT ASSEMBLY

Entered: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐



| Job: _____<br>Part No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          | DISPOSITION                                                                                                                                                                                                                                                                                                                  |                          | DEPARTMENT/PROCESS                                                                                                                                                                                                                                                                                     |                          |               |                          |                       |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                |  |                                                                                                                 |                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------|--------------------------|-----------------------|--------------------------|----------|--------------------------|---------------------|--------------------------|---------------------|--------------------------|---------------|--------------------------|----------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Date : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          | Sequence #: _____                                                                                                                                                                                                                                                                                                            |                          | QTY Affected : _____                                                                                                                                                                                                                                                                                   |                          |               |                          |                       |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                |  |                                                                                                                 |                                                                                                                                      |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          | Disposition                                                                                                                                                                                                                                                                                                                  |                          | MRB (QSI042)                                                                                                                                                                                                                                                                                           |                          |               |                          |                       |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                |  |                                                                                                                 |                                                                                                                                      |
| <b>Root Cause</b><br><table border="1"><tr><td>Operator</td><td><input type="checkbox"/></td></tr><tr><td>Manufacturing Process</td><td><input type="checkbox"/></td></tr><tr><td>Equip/Tooling</td><td><input type="checkbox"/></td></tr><tr><td>Handling/Preservation</td><td><input type="checkbox"/></td></tr><tr><td>Material</td><td><input type="checkbox"/></td></tr><tr><td>Product Improvement</td><td><input type="checkbox"/></td></tr><tr><td>Process Improvement</td><td><input type="checkbox"/></td></tr><tr><td>Human Factors</td><td><input type="checkbox"/></td></tr></table> |                          | Operator                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/> | Manufacturing Process                                                                                                                                                                                                                                                                                  | <input type="checkbox"/> | Equip/Tooling | <input type="checkbox"/> | Handling/Preservation | <input type="checkbox"/> | Material | <input type="checkbox"/> | Product Improvement | <input type="checkbox"/> | Process Improvement | <input type="checkbox"/> | Human Factors | <input type="checkbox"/> | Skid-tube <input type="checkbox"/><br>Machining <input type="checkbox"/><br>Large Fab <input type="checkbox"/> |  | Cross tube <input type="checkbox"/><br>Small Fab <input type="checkbox"/><br>Finishing <input type="checkbox"/> | Eng. (Non-AW) <input type="checkbox"/><br>Prod. Eng. Coord. <input type="checkbox"/><br>Rec/Store/Packaging <input type="checkbox"/> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          | Operator                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/> |                                                                                                                                                                                                                                                                                                        |                          |               |                          |                       |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                |  |                                                                                                                 |                                                                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          | Manufacturing Process                                                                                                                                                                                                                                                                                                        | <input type="checkbox"/> |                                                                                                                                                                                                                                                                                                        |                          |               |                          |                       |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                |  |                                                                                                                 |                                                                                                                                      |
| Equip/Tooling                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/> |                                                                                                                                                                                                                                                                                                                              |                          |                                                                                                                                                                                                                                                                                                        |                          |               |                          |                       |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                |  |                                                                                                                 |                                                                                                                                      |
| Handling/Preservation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/> |                                                                                                                                                                                                                                                                                                                              |                          |                                                                                                                                                                                                                                                                                                        |                          |               |                          |                       |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                |  |                                                                                                                 |                                                                                                                                      |
| Material                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input type="checkbox"/> |                                                                                                                                                                                                                                                                                                                              |                          |                                                                                                                                                                                                                                                                                                        |                          |               |                          |                       |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                |  |                                                                                                                 |                                                                                                                                      |
| Product Improvement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <input type="checkbox"/> |                                                                                                                                                                                                                                                                                                                              |                          |                                                                                                                                                                                                                                                                                                        |                          |               |                          |                       |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                |  |                                                                                                                 |                                                                                                                                      |
| Process Improvement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <input type="checkbox"/> |                                                                                                                                                                                                                                                                                                                              |                          |                                                                                                                                                                                                                                                                                                        |                          |               |                          |                       |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                |  |                                                                                                                 |                                                                                                                                      |
| Human Factors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/> |                                                                                                                                                                                                                                                                                                                              |                          |                                                                                                                                                                                                                                                                                                        |                          |               |                          |                       |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                |  |                                                                                                                 |                                                                                                                                      |
| Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          | Engineering <input type="checkbox"/><br>Water Jet <input type="checkbox"/><br>Supplier <input type="checkbox"/><br>Quality <input type="checkbox"/>                                                                                                                                                                          |                          |                                                                                                                                                                                                                                                                                                        |                          |               |                          |                       |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                |  |                                                                                                                 |                                                                                                                                      |
| Completed By                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          | Lead hand / Supervisor                                                                                                                                                                                                                                                                                                       |                          | QC / QA Coordinator                                                                                                                                                                                                                                                                                    |                          |               |                          |                       |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                |  |                                                                                                                 |                                                                                                                                      |
| <b>FAULT CATEGORY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |                                                                                                                                                                                                                                                                                                                              |                          |                                                                                                                                                                                                                                                                                                        |                          |               |                          |                       |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                |  |                                                                                                                 |                                                                                                                                      |
| Pressure/Forced <input type="checkbox"/><br>Bending <input type="checkbox"/><br>Crushing <input type="checkbox"/><br>Cracks <input type="checkbox"/><br>Crimp/Kink/Ripple/Wave/Twist <input type="checkbox"/><br>Marks/Chatter <input type="checkbox"/><br>Mislabeled <input type="checkbox"/><br>Other/Details: _____                                                                                                                                                                                                                                                                            |                          | Contamination <input type="checkbox"/><br>Misaligned/off center <input type="checkbox"/><br>BOM/Route <input type="checkbox"/><br>Broken/Damage/Defect <input type="checkbox"/><br>Incomplete/Unclear Instructions <input type="checkbox"/><br>Drill Holes <input type="checkbox"/><br>Fit/Function <input type="checkbox"/> |                          | Power Loss/Surge <input type="checkbox"/><br>Folio/Program <input type="checkbox"/><br>Grain Direction <input type="checkbox"/><br>Weld <input type="checkbox"/><br>Wrong Stock Pulled <input type="checkbox"/><br>Out of Sequence <input type="checkbox"/><br>Off-set/Set-up <input type="checkbox"/> |                          |               |                          |                       |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                |  |                                                                                                                 |                                                                                                                                      |
| Positioned Wrong <input type="checkbox"/><br>Outside Tolerance <input type="checkbox"/><br>Drawing <input type="checkbox"/><br>Finish <input type="checkbox"/><br>Part Lost/Missing <input type="checkbox"/><br>Misread <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                  |                          |                                                                                                                                                                                                                                                                                                                              |                          |                                                                                                                                                                                                                                                                                                        |                          |               |                          |                       |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                |  |                                                                                                                 |                                                                                                                                      |